

Environmental Sanitation Management Information System (ESMIS) for Local Authorities in Sri Lanka

“Web-based information management system to improve urban sanitation services and urban governance in Sri Lanka”

What is ESMIS?

ESMIS, is web-based Environment Sanitation Management Information System (ESMIS) through which most of the existing environmental sanitation and development information related to the services provided by the Local Authorities (LAs) are included.

The ESMIS web portal shall bring benefit to the Local Authorities in keeping their information related to sanitary services updated. Particularly, the web portal allows the information to be spatially analyzed and for staff to work on specifically identified actions. The accompanying system manual provides guidance about its functionality and updating requirements which is useful for the relevant divisions in Local Authorities (Planning, Sanitation Management, Infrastructure Management, Public Concerns, etc.) and specifically the Information Technology Managers, Database Operating Managers and Technical Staff.

Key Policy Messages

1. Adopting the ESMIS is a needed step *to improve the efficiency and effectiveness of Local Authorities' role in Sri Lanka*.
 - a. As environmental sanitation is one of the major tasks, this is recommended as a starting point.
2. Adopting the ESMIS will improve *Local Authorities' practices of good governance* by increasing transparency of service delivery to citizens and improve their responsiveness to customer queries.

As famously said by Le Corbusier, 'speed is the success of the city': speed not only in terms of mobility, but also in terms of delivery of services and flow of information. Information is the key for the speedy and effective delivery of services in a city. In that sense for any organization involved in service delivery, management of a reliable, accessible, and updated information base is no more an option but an urgent necessity.

One of the major weaknesses in the present local government system is the lack of information management systems that could improve the efficiency and effectiveness of local governance with the aim of enhancing its contribution towards upgrading the public service delivery and improving socio-economic development (Hattotuwa, 2009).

Why ESMIS?

The respective laws assigned the Local Authorities (LAs) of Sri Lanka with the *'powers and functions of regulation, control and administration of all matters relating to public health, public utility services and public thoroughfares, and generally, with the protection and promotion of comfort, convenience and welfare of the people and the amenities'* within the areas under their jurisdiction. To that end, environmental sanitation is one of the major tasks performed by the Local Authorities (LA) in Sri Lanka. It includes the Management of solid waste, waste water, septage and cleanliness of the physical environment against epidemics and mosquito breeding.

Although the LAs have been performing these tasks for many decades, the service delivery in environmental sanitation is not consistent and efficient in many LAs mainly due to the absence of properly managed systems to guide the activities involved in them. Maintaining information in conventional book keeping methods, which poses difficulties in accessing, retrieving and updating relevant information, is one of the main hindrances that prevent the improvement of the systems.

How ESMIS works?

Local Authorities who are installing the system can login from the assigned web address. Demonstration of the system can be viewed at <http://www.tcp.mrt.ac.lk/khub/>.

ESMIS is expected to provide a tri-partied interactive base for the system operators, and activity managers (officials of the LA) and the service receivers (citizens) of the selected LA areas. The information will be provided, retrieved, updated and verified by both the service providers and the receivers. A user manual provides guidance, generally for municipal council officers to use the system at the first stage.

Setting up and institutionalizing the ESMIS system for Sri Lanka

Based on the observations made on the EMISs operated in other countries, especially the K-Hub partner countries, and based on the lessons learnt from previous initiatives in Sri Lanka, an initial framework for the ESMIS was developed. The development of this framework involves a review of relevant literature and existing systems, survey of expert opinion and the organization of the technical devices such as the supportive software, map information, coding systems, etc.

The platform and the operation system of the ESMIS prepared by University of Moratuwa based on the comments received for the ESMIS pilot demonstration at Moratuwa & Gampaha Municipal council areas. The development was a continuous process that ran throughout the project period, addressing specific issues emerged during the process.

Project Partners ESMIS demonstration project in Sri Lanka

University of Moratuwa
Asian Development Bank
Moratuwa Municipal Council
Gampaha Municipal Council

By using this system the user can gain updated information while the local authorities may identify the locations that require their service. The ESMIS consists of a large number of data which will act as a bridge to link the public and municipal officers. On the user's end they will connect with the server via a Web Interface or a Mobile App. Users can feed data if they are authorized and all citizens can refer information back. Online transactions for tax payments are expected to be included into future system upgrades.

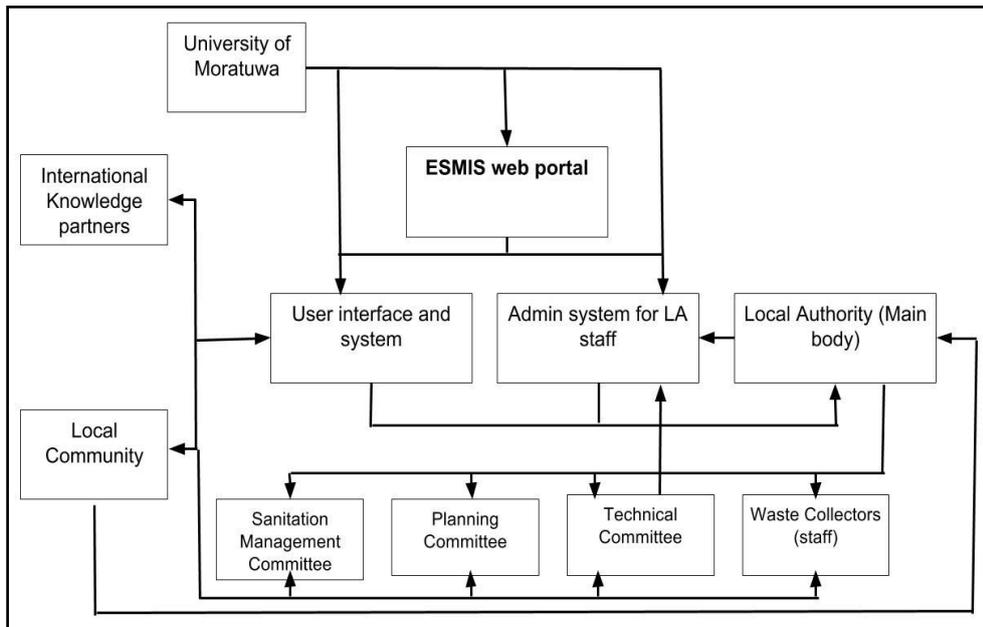


Figure 01: Representation of how ESMIS system can be functioned in a local authority

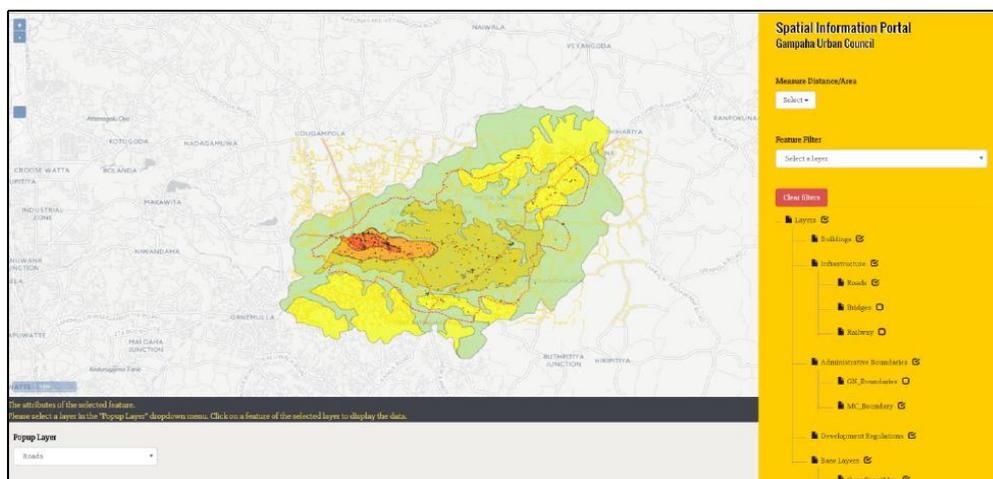


Figure 02: Interface of the spatial information portal

As demonstrated in figure 01, the ESMI System will function by networking with existing functional order of the local authority system. This system does not require a drastic change in the organizational structure. This can be operated with functional integration of existing tasks performed by different individuals/ groups/ committees in the local authority via the ESMIS web portal. The University of

Moratuwa main server obtains the server space provided for the web portal and the staff of the university shall carry out the maintenance. As shown in figure system, system will provide spatial and non-spatial information related to sanitation of each and every property (housing units and other establishments) within the local authority area, including common drainage system.

As a tool for Good Governance...

This system will promote good governance practices at local authority levels. *Efficiency and Effectiveness* of service delivery will be improved such as proper management of resources given critical information will be available easily. EMIS will improve the *transparency of service delivery* activities resulting in trust developing between local authorities and their citizens. Further, it will *improve the responsiveness* of local authorities for delivering public services and help improve response times for managing requests and complaints. Lastly, having a state of the art system could increase motivation of local authority staff in their jobs.

Way Forward?

It is expected to replicate the successful implementation of the pilot project in other local authority areas. In order to operationalize the process:

1. A series of *workshops to inform and motivate* the local authority staff about the usefulness and applications of the system are planned. Initially workshops will be carried out for selected municipal and urban councils that are at the verge of higher concentration of populations in the next 10 years.
2. *A national level steering committee* will be set up to review the gaps, challenges, and institutional bottlenecks in establishing the ESMIS system in other local authorities. This committee will be comprised of representatives of the local governments, provincial governments and aligned ministries on housing and sanitation.

South Asia Knowledge Hub Project

The ESMIS is the Asian Development Bank (ADB) and the governments of Bangladesh, India, Nepal, and Sri Lanka developed a project of the Sri Lanka national center of the South Asia Urban Knowledge Hub (K-Hub), a regional capacity development technical assistance (TA). The TA responds to country partnership strategies with a strong emphasis on knowledge management and solutions, results orientation, and regional cooperation. It also reflects the general recognition that solutions for increasingly complex urban environments require bold action guided by knowledge. <http://khub.niua.org>

View the demonstration system: <http://www.tcp.mrt.ac.lk/khub/> .